Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau **http://healthlab.hhs.mt.gov/** **04/19/10**

Tree Provides Low-cost Water Purification Method for Developing World

A low-cost water purification technique published in *Current Protocols in Microbiology* could help drastically reduce the incidence of **waterborne disease** in the developing world. The procedure, which uses seeds from the *Moringa oleifera* tree, can produce a 90.00% to 99.99% bacterial reduction in previously untreated water, and has been made free to download as part of access programs under John Wiley & Sons' Corporate Citizenship Initiative.

A billion people across Asia, Africa, and Latin America are estimated to rely on untreated surface water sources for their daily water needs. Of these, some two million are thought to die from diseases caught from contaminated water every year, with the majority of these deaths occurring among children under five years of age. Michael Lea, a *Current Protocols* author and a researcher at Clearinghouse, a Canadian organization dedicated to investigating and implementing low-cost water purification technologies, believes the *Moringa oleifera* tree could go a long way to providing a solution.

"Moringa oleifera is a vegetable tree which is grown in Africa, Central and South America, the Indian subcontinent, and South East Asia. It could be considered to be one of the world's most useful trees," said Lea. "Not only is it drought resistant, it also yields cooking and lighting oil, soil fertilizer, as well as highly nutritious food in the form of its pods, leaves, seeds and flowers. Perhaps most importantly, its seeds can be used to purify drinking water at virtually no cost."

Moringa tree seeds, when crushed into powder, can be used as a water-soluble extract in suspension, resulting in an effective natural clarification agent for highly turbid and untreated **pathogenic surface water**. As well as improving drinkability, this technique reduces water turbidity (cloudiness) making the result aesthetically as well as microbiologically more acceptable for human consumption.

Laboratory Professionals
Get Results

April 18-24 marks the **35th Anniversary of National Medical Laboratory Professionals Week**

This week-long celebration recognizes the vital role individual laboratory professionals play in the performance of laboratory testing in health care. *Labs Are Vital* would like to extend a heartfelt 'Thank You!' for all your hard work to "Get Results".

Ergonomics and the "Seasoned" Workforce

It is expected that the working population over the age of 55 will grow by 38% in the next decade, and 75% in the next 25 years. Despite the aging process, laboratories should accommodate all ages, including *older workers, because this segment of the workforce with their vast knowledge and experience are a valuable asset*.

Employing a seasoned workforce can be both challenging and beneficial. However, older workers' needs differ from their younger counterparts and safety considerations must be targeted at this segment of the workforce. The following are suggestions to help with age-related accommodations**:** www.safetylady.com

http://www.handhealthresources.com/Solutions%20Pages/Ergonomics.htm

"We are what we repeatedly do.

Excellence, then, is not an act, but a habit"

Aristotle

BT Wet Workshop July 30th

Save the Date

MT Communicable Disease Update Week 14 Ending 04/10/10

This newsletter is produced by the Montana Communicable Disease Epidemiology Program.
Questions regarding its content should be directed to 406.444.0273 (24/7/365).
http://cdepi.hhs.mt.gov

DISEASE INFORMATION

Summary – Week 14 – Ending 04/10/10 – Disease reports received at DPHHS during the reporting period April 4-10, 2010 included the following:

- Vaccine Preventable Diseases: Hepatitis A (1), Varicella (1)
- Enteric Diseases: Campylobacteriosis (2), Giardiasis (3), Salmonellosis (2)
- Other Conditions: None
- Travel Related Conditions: None

NOTE: The report has multiple pages reflecting the following information: (1) vaccine preventable and enteric diseases YTD; (2) other communicable diseases YTD; (3) cases just this week; (4) clusters and outbreaks; and (5) an STD summary.

Surveillance Snippet – Two recent cases of hepatitis A in travelers serve as a reminder of the importance of hepatitis A vaccination prior to international travel to or adoption of children from high endemicity areas. Hepatitis A is one of the most common vaccine-preventable infections acquired during travel. Most travel-related cases in the U.S. (72%) in 2006 were associated with travel to Mexico and Central/South America. All susceptible persons traveling to or working in countries that have high or intermediate hepatitis A endemicity should be vaccinated before departure.
http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-2/hepatitis-a.aspx
http://www.immunize.org/askexperts/experts_hepa.asp#special

Influenza

Montana – Activity level in Montana for week 14 is **SPORADIC.** **NEW!** There have been no Montana Public Health Laboratory PCR confirmed influenza cases since April 7. **IMPORTANT!** Please remind providers to send specimens to the Montana Public Health Laboratory for PCR testing, regardless of rapid influenza test results, if the individual presents with an influenza-like-illness and a definitive diagnosis is desired. ***Rapid influenza tests should be interpreted with caution at this time.*** Per IDSA Guidelines, a confirmatory test such as PCR or viral culture should be considered when the prevalence of influenza is low (http://www.journals.uchicago.edu/doi/pdf/10.1086/598513).

Current information on influenza testing by the Montana Public Health Laboratory: http://www.dphhs.mt.gov/PHSD/Lab/environ-lab-index.shtml.

United States - During week 14 (04/10/10), influenza decreased from the previous week. (http://www.cdc.gov/flu/weekly/usmap.htm)

INFORMATION / ANNOUNCEMENTS

Measles Outbreak British Columbia – As of April 8, there are 29 confirmed cases of measles in British Columbia. None of the cases identified to date had two doses of measles vaccine, which is needed for full protection. (http://www.bccdc.ca/default.htm) *The diagnosis of measles should be considered in any person with a generalized maculopapular rash lasting ≥ 3 days, a temperature ≥ 101°F (38.3°C), and cough, coryza, or conjunctivitis. Immunocompromised patients may not exhibit rash or may exhibit an atypical rash.* Contact local public health immediately to report a suspected case (do not wait for serological confirmation to report) and for assistance with diagnostic testing through the Montana Public Health Laboratory. (http://www.cdc.gov/measles/index.html)

"What's New" at http://cdepi.hhs.mt.gov

- **Communicable Disease Summary: A Guide for Schools** – The Communicable Disease Summary: A Guide for Schools has been mailed to all Montana K-12 schools, local health departments and infection preventionists.
- **Communicable Diseases Stats and Facts: 2008** - This first ever report provides a summary of reportable communicable disease activity in Montana for 2008, including highlights from the year. The 2009 report will be released in June.
- **Surveillance Snapshot** – The most recent Surveillance Snapshot is a review about norovirus in Montana.

Montana Public Health: Prevention Opportunities Under the Big Sky – The March issue reviews the diagnosis and treatment of syphilis. http://www.dphhs.mt.gov/PHSD/prevention_opps/pdf/MPHMar2010.pdf